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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,222	11/17/2003	Frederick L. Martin	CML01286J	4439

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EXAMINER	
FILE, ERIN M	

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/715,222	Applicant(s) MARTIN ET AL.	
	Examiner Erin M. File	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *29* is/are allowed.

6)☒ Claim(s) *1-3,5-17, 19-28* is/are rejected.

7)☐ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see remarks, filed September 27, 2005, with respect to the rejection(s) of claim(s) 1-3, 9, 10, 15, and 19-21 under *35 USC § 102* as anticipated by Inuzuka have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Inuzuka.

2. Applicant's arguments, see remarks, filed September 27, 2005, with respect to *35 USC § 112* rejection of Claim 8 has been fully considered and is persuasive. The *35 USC § 112* rejection of Claim 8 has been withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 9-14, 19-21, and 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Inuzuka.

Claims 1, 19, Inuzuka discloses a spread spectrum communications system and receiver, comprising:

- a frequency generator that generates a local oscillator signal without use of a piezoelectric crystal (fig.12, 215)
- a frequency converter (202, 208) that receives the local oscillator signal and mixes the local oscillator signal with a received signal to produce a down-converted signal
- direct sequence (DS) spread spectrum system (col. 1, lines 11-17) encodes with a set of DSSS codes
- differential detectors (205, 211) that receive the down-converted signals
- correlation circuits (207, 213) receive differentially detected signals and correlate with a predetermined code (col. 14, lines 6-14)

Claim 2, 20, inherits the limitations of Claim 1. Further, Inuzuka discloses the differential detector (fig. 2) comprises one chip symbol delays (112), one being an integer multiple of chip periods (col. 2, 31-36).

Claims 3, 21, although Inuzuka does not explicitly state that the differentially detected-signal comprises output chips which are a function of a plurality of successive chips of the received signal, the output chips of a differential detector are by definition a function of a plurality of successive chips of the input signal.

Claim 9, inherits the limitations of Claim 1, further Inuzuka discloses the down-converted signal comprises a baseband signal (col. 1, lines 60-65).

Claim 10, inherits the limitations of Claim 1, further Inuzuka discloses the down-converted signal comprises an intermediate frequency (IF) signal (col. 1, lines 39-41).

Claims 11, 12, 23-28, inherit the limitations of Claim 1, further Inukuza discloses an aspect of the invention is also transmitting a spread spectrum modulated signal on a carrier (col. 4, lines 10-13).

Claim 13, inherits the limitations of Claim 1, Inukuza discloses differential decoding circuits (fig. 12, 205, 211) includes a processor that receives the down-converted signal and produces output chips therefrom which are a function of a plurality of successive chips of the received DSSS signal (col. 13, line 65- col. 14, line 5).

Claim 14, inherits the limitations of Claim 13, Inukuza further discloses correlating output chips at the output of the processor to at least one spread spectrum code that

has been derived from the received spread spectrum signal (col. 13, line 65- col. 14, line 5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuzuka and in further view of Dent.

Claims 7, 15, contain the limitations of Claim 5 as disclosed above. Inukuza fails to disclose the limitation of compensating the RF source against changes in at least one of the temperature or operating voltage. However, Dent discloses an apparatus for receiving spread spectrum signals (abstract) which corrects a frequency source in response to temperature. Dent also discloses his corrective method accelerates synchronization ([0046], lines 17-22). Because of this advantage, it would be obvious to one skilled in the art a t the time of invention to use compensation for temperature variations as disclosed by Dent into the invention of Inuzuka.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inuzuka and in further view of Armstrong

Claim 8, Although Inuzuka fails to disclose the frequency converter comprises a multiple conversion frequency converter. Armstrong discloses a multiple conversion frequency converter for use in a receiver a(fig. 4). The applicant discloses multiple conversion frequency converters are a clearly understood variant of a frequency converter by those of ordinary skill in the art (remarks, p.12, lines 13-16). Therefore the use of a multiple conversion frequency converter, such that disclosed by Armstrong, in the invention of Inuzuka would be obvious to one of ordinary skill in the art at the time of invention.

8. Claims 5, 6, 16, 17, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuzuka and Dent and in further view of Naden.

Claims 5, 16, 22, inherit the limitations of Claims 1, 15, and 19 respectively. Inuzuka fails to disclose the frequency generator comprises one of an LC type oscillator, an RC type oscillator, a relaxation oscillator, a ring oscillator and a voltage controlled oscillator, however, Naden discloses the use of a voltage controlled oscillator (fig. 32, 3250) in a direct sequence spread spectrum (DSSS) communication device (col. 1, lines 42-51). Because of the similarity of the function of the local oscillator to downconvert a direct spread spectrum communication device, and further because the Inuzuka device does

not teach the use of any specific type of oscillator, it would be obvious to one skilled in the art at the time of invention to incorporate Naden's voltage controlled oscillator into the combined teachings of Inuzuka and Dent.

Claims 6, 17, inherit the limitations of Claims 1 and 15 respectively, Inuzuka fails to disclose a control signal for initial adjustment of the frequency of the local oscillator signal, however, Naden discloses a control signal for initial adjustment of the frequency of the local oscillator signal in a direct sequence spread spectrum (DSSS) communication device (col. 44, lines 7-10). For the reasons specified above, it would be obvious to one skilled in the art at the time of invention to incorporate Naden's voltage controlled oscillator into the combined teachings of Inuzuka and Dent.

Allowable Subject Matter

9. Claim 29 is allowed.

10. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin M. File

11/2/2005

STEPHEN CHIN
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